# Sample NASA Honor Award (Individual) Nomination

**Award Title:**
Exceptional Engineering Achievement Medal (EEAM)
Medal Criteria: This prestigious NASA medal is awarded to both Government and non-Government individuals for exceptional engineering contributions toward achievement of NASA's mission. This award may be given for individual efforts or application of engineering principles or methods that have resulted in a contribution of fundamental importance in this field, have significantly enhanced understanding of this field, or have significantly advanced the state of the practice as demonstrated by an application to aerospace systems. The criteria also includes the following:

1. Accomplishments are far above others in quality, scope, and impact. Magnitude of accomplishments
2. Accomplishments are explicit, significant, and demonstrate results. Impact & Results

Engineering contributions are typically characterized as being the design, development, and application of tools and systems, or significant process improvements.

| **Name of Nominee:** | **Nominee's Organization/Mailing Address:** |
|---|---|
| Ms. Nominee | XYZ Center |
| **Group Representative:** | **Group Name:** (*50 maximum characters*) |
| N/A | N/A |

**Nominator's Name and E-mail Address:**

**Citation (to be printed on the certificate):** (*174 characters/spaces of 175 maximum*)
For engineering excellence in the investigation of the Space Shuttle External Tank, significantly decreasing potential for foam shedding and leading to safer Shuttle flights.

**Justification:** (*3,493 characters/spaces of 3,500 maximum*)
(Opening) ← Explains position and gives view of overall career accomplishments
For the past 3-1/2 years, Mr. Nominee spearheaded the investigation, and understanding of the Space Shuttle external tank (ET) LO2 and LH2 cable trays aeroelastic stability. This activity has a significant impact because it enabled the removal of aprox 35lbs of foam ramps from the ET, which decreased the potential for foam shedding during launch and increasing the safety of STS-121 and all future Space Shuttle flights.

(Justification) ← Gives more detailed information on accomplishments with specific explanation of impact
Mr. Nominee completed a thorough review of the previously conducted (~25 years ago) conservative, empirical, quasi-steady analysis of a two-dimensional section that ultimately led to designing and installing the PAL ramps on the ET. Mr. Nominee then established the steps necessary to fully evaluate the aeroelastic stability of the cable trays. This included proposing or advocating Ground Vibration Testing of cable trays, various wind tunnel tests for steady airloads and stability derivatives, advanced steady computational fluid dynamics (CFD) calculations supporting the definition of the aerodynamic environment, and ultimately the wind-tunnel testing of full-scale vehicle cable tray components for aeroelastic stability. He advocated for the installation of instrumentation on the first Shuttle Return-to-Flight launch as part of the full spectrum of measurements and analyses that he would ultimately use to determine if the PAL ramps were required to prevent an aeroelastic instability of the ET cable trays. From the aeroelastic-characterization wind-tunnel test that he led, no aeroelastic instabilities or damaging cable tray response levels were encountered for any of the configurations tested at any of the conditions tested. Desired margins in dynamic pressure were achieved for the LO2 cable tray, but because of tunnel limitations, desired margins in dynamic pressure could not be achieved for one LH2 cable tray configuration. The flight instrumentation recommended by Mr. Nominee and partially accepted for the first Shuttle return-to-flight further characterized LO2 cable trays by providing the first-ever cable tray response flight data during the STS-114 flight. Mr. Nominee conveyed to the Shuttle program that removal of the PAL ramp protecting the LO2 cable tray was a viable alternative to the existing LO2 cable tray PAL ramp. Mr. Nominee determined that there were no known concerns with removing the PAL ramp for the LH2 cable trays. Mr. Nominee's assessment of the cumulative work of the PAL ramp team was presented, scrutinized, and later accepted as technically sound and thorough at several technology interchange meetings. This includes three written reports to the Space Shuttle External Tank Project Office and a presentation by Mr. Nominee to the December 2005 Shuttle Engineering Review Board at which the initial Shuttle program decision to remove the PAL ramps was made. The result of this intense effort was the removal of the PAL ramps from both the LO2 and LH2 cable trays for STS-121. Removal of the PAL ramps was the largest single change in the external shape of the ET in the history of the Space Shuttle. STS-121 experienced a successful launch without cable-tray aeroelastic issues.

(Closing remarks) ← Strong conclusion

It is because of Mr. Nominee's experience, knowledge, insightfulness, and technical leadership that a sizable amount of foam has been removed from the ET, thus making Space Shuttle launches significantly safer. Mr. Nominee brought a level of experience and expertise in aeroelasticity that may be unmatched in the United States.

*Please note the following disclaimer: The nomination examples are for guidance and/or reference only. Use of any part of the documents is no guarantee of an approved honor award nomination.*